

**ABSTRACT**

The invention provides compositions and methods of enhancing the viability of primary stem cells and enhancing the engraftment of transplanted stem cells into a mammalian recipient. Accordingly, the invention includes a method of regenerating a mesenchymally-derived tissue by contacting the tissue with a composition containing an isolated adult mesenchymal stem cell, which are apoptosis-resistant. The mesenchymal stem cell is an adult cell obtained from an adult bone marrow.

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